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# Amateur Radio

JOURNAL OF  
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# AMATEUR RADIO

Published by the Wireless Institute of Australia,  
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Melbourne, C.1

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20 Queen St., Melbourne, C.1.  
Telephone: MU 5154.

**PRINTERS:**

"RICHMOND CHRONICLE."  
Shakespeare St., Richmond, E.1.  
Telephone: JB 2419.

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," Law Court Chambers, 191 Queen St., Melbourne, C.1, on or before the 8th of each month.

Subscription rate in Australia is 9/- per annum, in advance (post paid) and A10/6 in all other countries.

Wireless Institute of Australia  
(Victorian Division) Rooms' Telephone is FJ 6997.

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**VK6WI:** Sundays, 0930 hours WAST, on 7196 Kc. No frequency checks available.

**VK7WI:** Sundays, at 1000 hours EST, on 7196 Kc. and 144.5 Mc. No frequency checks are available.

## EDITORIAL



## Christmas Greetings

With the arrival of the month of December comes thoughts of Christmas and the end of another year's work. Ordinary day by day worries, the trials and tribulations of commerce, the rush and bustle of our very existence give way to the atmosphere of Christmas with the traditional exchange of greetings one to another all over the world. Business care abandoned, some of us enter the holiday period with that freedom of thought to do what we want with our time, to enjoy the comfort of our friends and families, to rejoice with our fellow beings in the activities of the festive season, and to crowd into the holiday every happy minute we can muster.

For many Amateurs it is the time for completing those unfinished pieces of equipment; for re-building projects that for the past months have been merely a rough plan committed to a piece of paper poked away in a magazine or the corner of the desk drawer; for construction of the new "rig," the beam, the converters, the v.i.o., the dozen and one pieces of equipment for which the component parts have been so zealously saved for during the year when time did not permit of doing the

practical work. It is the time for which many of us have looked forward with a keen and calculating mind when much will be done to enable us to greater enjoy our hobby the next year.

For those who have found the time throughout the year to build portable or mobile equipment, it is the time for holidaying in the open where the fun of being free can be enjoyed with the family and friends together with the opportunity to try out the new gear.

But whilst many can play, some will work. Communications must be maintained, public services must continue to function, broadcasting services must continue dispensing entertainment to listeners, essential industry must maintain production. But in every walk of life the Christmas spirit will prevail.

And so to all Amateurs—wherever they may be, on land or sea or in the air—the Wireless Institute of Australia sends to them the same old words, "A MERRY CHRISTMAS," and may you—and all those associated with you—enjoy to the full the festive season.

—FEDERAL EXECUTIVE

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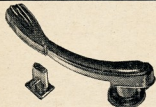
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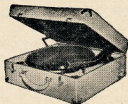
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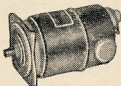
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# N.B.F.M. Phase Modulator Exciter for 80, 40, and 20

BY DON B. KNOCK,\* VK2NO

**N**ARROW Band Frequency Modulation as applied to our popular h.f. bands has been termed "b.c.i.-less." To imagine that the use of n.b.f.m. will result in complete eradication of all forms of b.c.i. is simply to hide one's head in the sand. It won't banish interference of the tunable spot kind, or shock interference introduced by the presence of a fair amount of carrier but a foot or two distant from the neighbouring b.c.i.'s antenna. It will, however, get right away from the blanketing kind of b.c.i. that sneaks along the power lines and gets into the b.c. receiver audio channel via the second detector grid circuit. The latter kind of b.c.i. is a tough proposition to chase out with a.m., and the use of n.b.f.m. on that score alone is ample justification. Apart from b.c.i., there is the further advantage, that of moderate modulation gear; a feature of several systems other than n.b.f.m. But n.b.f.m. has that aforementioned advantage up its sleeve—a goodly step along the road to b.c.i. elimination.

\* 43 Yanko Avenue, Waverley, Sydney.

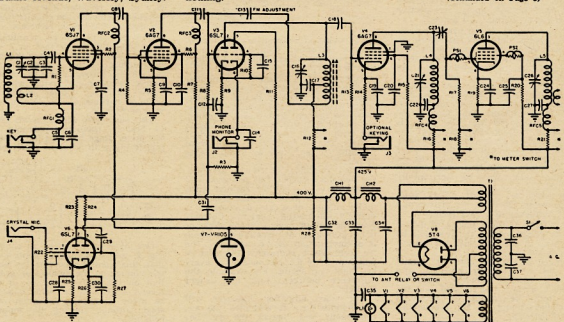
A desire to use 80 metres for up and down country contacts prompted the writer to have a go at n.b.f.m. Many variations of reactance modulator and other schemes were put to the test, bearing in mind that in nearly all instances the signal had to be copied on an a.m. receiver. There are as yet few n.b.f.m. adaptors or appropriate receivers in use. Also, this same condition was wanted on 40 metres. Use of a.m. on 80 and 40, in the writer's location, spells certain b.c.i. Rusted conduit runs through nearby houses, and there might as well be a series of crystal detectors slung around the district!

The following description is of a Phase Modulation Exciter employing the method first put forward by W2GDG ("QST," Jan., 1947), Chief Engineer of the Sonar Radio Corp., N.Y. Locally, VK2ABU built an adaptation of the circuit into his existing exciter, and appeared on 40 and 20 with a different kind of n.b.f.m. transmission in which the apparent audio, as copied on the average a.m. receiver, lacked little or nothing.

The writer, attracted by the results obtained, recalled that a constructional article had been featured in "Radio and Television News" (U.S.A.) by W6EBT and republished two years ago in this country. Circuit diagram of W6EBT's exciter is illustrated here and a description of the version in use at the writer's station is appended. It is fitting to say at this juncture that many stations have expressed surprise that the method of speech transmission should be anything other than a.m.—for that is what it sounds like on the average a.m. receiver.

## THE CIRCUIT

Reference to the diagram shows the following set-up. A 6SJ7 v.f.o. (V1) operates on 80 metres with (V2) a 6AG7 Class A untuned r.f. isolating stage following. Next comes a 6SL7 (V3) frequency modulator which tunes like any other r.f. stage. The condenser C16 is used across a slug-cored coil; the use of powdered iron here being important by providing increased deviation. Any powdered iron form of standard kind may be used. The second 6SL7 (V6) (Continued on Page 8)



R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>—26,000 ohm, 1 w. res.  
R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>—300,000 ohm, 1/2 w. res.  
R<sub>7</sub>—6000 ohm, 1 w. res.  
R<sub>8</sub>, R<sub>9</sub>, R<sub>10</sub>—50 ohm, 5 w. wirewound res.  
R<sub>11</sub>—10,000 ohm, 2 w. res.  
R<sub>12</sub>—1000 ohm, 2 w. wirewound res.  
R<sub>13</sub>—50,000 ohm, 1/2 w. res.  
R<sub>14</sub>, R<sub>15</sub>—1 megohm, 1/2 w. res.  
R<sub>16</sub>, R<sub>17</sub>, R<sub>18</sub>, R<sub>19</sub>, R<sub>20</sub>—50 ohm, 1 w. res.  
R<sub>21</sub>—1 megohm, 1 w. res.  
R<sub>22</sub>—22,000 ohm, 2 w. res.  
R<sub>23</sub>—100,000 ohm, 1 w. res.  
R<sub>24</sub>—400 ohm, 10 w. wirewound res.  
R<sub>25</sub>—40,000 ohm, 10 w. wirewound res.  
R<sub>26</sub>—300,000 ohm pot.  
R<sub>27</sub>, R<sub>28</sub>—250,000 ohm, 1/2 w. res.  
R<sub>29</sub>—1000 ohm, 1 w. res.  
R<sub>30</sub>—30,000 ohm, 30 w. wirewound res. (with slider)  
C<sub>1</sub>—140 pfd. straight line var. cond.

C<sub>2</sub>—350 pfd. ceramic cond.  
C<sub>3</sub>—20 pfd. ceramic cond.  
C<sub>4</sub>—300 pfd. ceramic cond.  
C<sub>5</sub>, C<sub>6</sub>, C<sub>7</sub>, C<sub>8</sub>—0.02 pfd., 400 v. cond.  
C<sub>9</sub>, C<sub>10</sub>, C<sub>11</sub>, C<sub>12</sub>, C<sub>13</sub>—100 pfd. mica cond.  
C<sub>14</sub>—0.03 pfd., 100 v. cond.  
C<sub>15</sub>, C<sub>16</sub>, C<sub>17</sub>—0.05 pfd., 400 v. cond.  
C<sub>18</sub>—30 pfd. mica cond.  
C<sub>19</sub>—See text  
C<sub>20</sub>, C<sub>21</sub>, C<sub>22</sub>, C<sub>23</sub>, C<sub>24</sub>, C<sub>25</sub>—0.1 pfd., 600 v. cond.  
C<sub>26</sub>, C<sub>27</sub>—75 pfd. var. cond.  
C<sub>28</sub>, C<sub>29</sub>—0.05 pfd., 400 v. cond.  
C<sub>30</sub>—50 pfd. midjet var. cond. (APC type)  
C<sub>31</sub>—0.2 pfd., 600 v. cond.  
C<sub>32</sub>—35 pfd. midjet var. cond.  
C<sub>33</sub>, C<sub>34</sub>—40 pfd., 450 v. elec. cond.  
C<sub>35</sub>—0.1 pfd., 600 v. cond.  
C<sub>36</sub>—1 pfd., 600 v. cond.  
J<sub>1</sub>, J<sub>2</sub>, J<sub>3</sub>—Closed circuit jack

L<sub>1</sub>—Open circuit jack  
L<sub>2</sub>—Power trans., 425-0-425 @ 200 ma., 6.3 v., @ 4 amps.; 5 v., @ 3 amps.  
P51, P52—Parasitic suppressor, 50 ohm, 1/2 w. res. with 10 x 20 cm. wire  
CH<sub>1</sub>—6 hy., 75 ma. filter choke  
CH<sub>2</sub>—10 hy., 200 ma. filter choke  
S—S.p.s.t. toggle sw.  
Meter—sw. 2-pole, 4-pos. sw.  
Meter—50 m.a. d.c. meter (See text)  
L<sub>3</sub>, L<sub>4</sub>, L<sub>5</sub>, L<sub>6</sub>—See coil table  
R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>—R.f. choke (National R-100U or equivalent)  
RFC<sub>1</sub>, RFC<sub>2</sub>, RFC<sub>3</sub>—R.f. choke, 220 en. closewound.  
T<sub>1</sub>—coil length is 1/2" form  
PL<sub>1</sub>—6.3 v. pilot lamp  
1—6L6 tube  
2—6SL7 tubes  
1—VR-105 tube  
1—3T4 tube  
1—6SJ7  
2—6AG7

# TELEVISION MADE EASY

## Part iv.—What's in a Television Receiver?

BY KEN WALL AND JOHN JARMAN,\* VK3ADA

What, no circuit diagram? Was I too lazy to draw one? Well, maybe, but actually, there are two good reasons why no diagram of a complete receiver has been included. Firstly, such diagrams are regularly published in quite a number of magazines, imported from both England and U.S.A., and the object of these articles is not to duplicate what is already available in other literature, but to bridge the "gulf" between the television data in current magazines and the standard of training of the average Ham.

Secondly, the design of television receivers is making such rapid progress that new circuits come out almost daily, the object being, of course, to simplify construction, for the sake of economy, without spoiling the quality of reception.

The receiver circuits used today are therefore likely to be out of date by the time television is established in Australia, so we shall confine these articles to the operating principles which will always apply, irrespective of changes in circuit. All agreed?

For the benefit of readers who already possess imported literature on television receivers, it may be as well at this stage to note how overseas television systems differ from that in Australia.

The English system uses positive modulation (i.e. the brighter the picture, the greater the carrier amplitude). 405 lines per picture, and carrier frequencies around 50 Mc. The sound is also transmitted by amplitude modulation, instead of frequency modulation, and on a frequency lower than that of the picture signal. The radio waves are also vertically polarised, whereas in Australia they will be horizontally polarised.

The American system differs from ours by using 525 lines per picture and a field frequency of 60 per second.

The effects of these points of difference on design of the receiver will be explained, as we deal with the appropriate section.

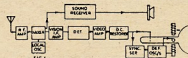
So much for that introductory "burst," let's now get down to business, and study a typical television receiver. We have already learnt that our receiver must be capable of receiving frequencies around 200 Mc. (remember the last article?)

Furthermore, each television transmission occupies a bandwidth of 7.5 Mc. and consists of two carriers 6 Mc. apart. The upper one is frequency modulated by the sound signals, and the lower one, amplitude modulated by picture and controlling signals.

Now cock your eye over Fig. 1. This receiver is a superhet type, and although i.f. receivers can be used (and are quite popular in England), we will probably find that here in Australia, where the carrier frequencies will range

from 180-204 Mc., the superhet circuit will be necessary for better stability, so this is what we will discuss.

Remembering that a single television channel occupies a bandwidth of 7.5 Mc., the aerial and r.f. amplifier must be types capable of accepting this wide range of frequencies and, of course, suitable for the high frequencies used. The r.f. amplifier is therefore broadly tuned to bring in both the picture and sound signals (which are 6 Mc. apart) and pass them on to the mixer, where they are separated, to produce two different i.f.s. If the receiver is intended to pick up more than one station, "tuning" is accomplished by a selector switch, which brings in a different pre-tuned r.f. and oscillator circuit for each channel. We don't use tuning gangs like one finds in a broadcast receiver.



The sound i.f. is frequency modulated, so that the sound section is a typical f.m. receiver, which will be described in a later article.

The picture, or "vision" i.f. amplifier consists of a number of broadly tuned stages, and is followed by the detector, which separates the modulating signal from the carrier. In the case of sound, we would call this the "audio" signal, but with vision, we call it a "video" signal. This is simply a Latin word meaning "I see," just as audio means "I hear."

Video amplifier, of course, amplifies the detector's output, but my goodness! "What the — is a d.c. restorer when it's at home?" Well, it's like this. The audio output of a sound detector is entirely alternating current. Correct? Now the output from a vision detector is not pure a.c., but pulsating d.c., which is a combination of a.c. and d.c. The a.c. component represents the picture detail, and the d.c. component the average light and shade. For example, the difference between dusk and bright sunlight.

The video amplifier, however, will not handle d.c. It amplifies the a.c. component and "leaves the d.c. behind," so the d.c. restorer is a device for "artificially" replacing the d.c. component of the signal which is "lost" in the video amplifier.

The modern trend, by the way, is to omit the video amplifier and d.c. restorer and feed the detector's output directly on to the grid of the c.r.t.

Now we will recall that our video signal is composed of both picture impulses and controlling signals. The picture impulses, of course, are applied to the grid of the cathode ray tube to vary the intensity of the electron beam, thus "painting" the picture, as explained in article one.

The blanking signals also vary the intensity of the electron beam, making the spot invisible between lines and between fields, as we learned in the last article.

The synchronising pulses, however, are required to control the deflection oscillators. Just how they do it is the subject of a later article, but it should be noted that the picture impulses must not be allowed to enter the deflection circuits. We therefore use a synchronising separator, which "clips off" the synchronising pulses and passes them on to the deflection oscillators (putting it briefly), leaving the picture and blanking signals behind.

Before reading any further, study Fig. 1 carefully, and make sure you are clear about the function of each part shown. Revise also the composition of the television signal, explained in the last article, noting carefully the types of signals which our receiver must handle.

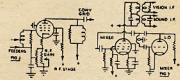
Here's a little test for you. As we will see later, no attempt is made to prevent the synchronising pulses from reaching the grid of the c.r.t. Why? Figure this out.

We shall now deal with each part of the receiver in more detail.

Remember, the diagrams shown are intended purely to illustrate how each part of the receiver does its job, and are not necessarily the circuits that will be used in Australian receivers.

Starting with the r.f. amplifier, its purpose is similar to that in a sound receiver, namely, to improve the signal-interference ratio. Although many text books, through force of habit, call this a "signal-noise" ratio, what they really mean by "noise" is the intermittent marking of the screen, caused by interference.

This stage also serves as an isolator, to prevent oscillating currents from the mixer stage entering the aerial and interfering with adjacent receivers.



One type of r.f. stage is shown in Fig. 2, using an r.f. gain control. Note that this control operates by varying the voltage on the suppressor grid, not that on the control grid, as in sound receivers. This is to permit changes to be made in the amplification of the stage without altering the input impedance.

The next stage could be a converter, but owing to the high frequencies used, we will probably find the mixer-oscillator set-up preferable for stability (see Fig. 3). In any case, however, provision is made for two separate i.f. outputs, one for sound, the other for vision. In this article, we shall concentrate on the latter.

The intermediate frequency always has a high value. In American receivers, it is around 30 Mc. and we'll probably find similar values used here in Australia. In any case, the i.f. amplifier must be capable of evenly amplifying a band of frequencies 6 Mc.

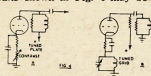
\* A11426 L.A.C. Jarman, J.B., c/o S/L Garden, Box 1424H, G.P.O., Adelaide.

wide, yet it must also be capable of rejecting the sound i.f. which differs from the vision i.f. by only 6 Mc.

The broad response of this amplifier is achieved by using suitable coupling between stages.

Transformer coupling can be used, the required bandpass being obtained by either staggering the tuning, or using damping resistors across each winding.

Alternatively, the damped coupling circuits shown in Fig. 4 may be used.

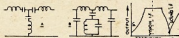


It is most essential that sound signals do not reach the vision detector, as we will learn later when discussing interference.

The i.f. amplifier is therefore provided with "traps" tuned to reject the sound i.f. One type is shown in Fig. 4b.

Perhaps the best form of i.f. coupling is the band-pass filter, two types of which are shown in Fig. 5. These can be adjusted to give a response like that shown in Fig. 5c. The flat portion can be made almost as wide as desired, and in addition, such type of filter can

be made to reject any particular undesired frequency such as the sound i.f. Like everything else, however, this type of coupling has its disadvantages and may not suit all types of receivers.



In our final picture, the contrast between light and shade depends upon the amplification of the signal, so that by varying the amount of amplification in the i.f. stages, we can adjust this contrast.

The simplest method is to use adjustable cathode bias, as in Fig. 4a, though other more complicated forms are often found. The necessity for contrast control will be explained in the next article.

The detector is usually the diode type, but owing to the high value of video frequencies, compared with audio frequencies, its load resistor cannot be by-passed by a simple condenser. Instead, we must use a filter system, but oh my! I'm working overtime!

The detector is the subject of our next article, which will also cover the video amplifier and receiver controls, so until next month, cheerio and 73's, and don't forget to send us your queries!

## N.B.F.M. PHASE MODULATOR EXCITER FOR 80, 40, AND 20

(Continued from Page 3)

is applied as a two stage speech amplifier, and the input takes the usual crystal (or other) microphone.

### THE FREQUENCY MODULATOR

The only unusual feature of the circuit is the f.m. adjustment condenser C13. This is a capacity of approximately 2 pF. and may be merely two short pieces of insulated wire twisted together for three turns. The arrangement looks like a plate neutralisation connection, but its function is to increase the f.m.

Once installed and adjusted, no further alteration is required. In tuning C16, it is found that the plates will be about four-fifths meshed and need seldom be touched for v.f.o. changes of several hundred kilocycles. A phone monitor circuit is included and although not essential, is useful for checking speech quality.

### QUADRUPLER

A 6AG7 (V4) is used as a quadrupler and is capacity-coupled to the anode of the modulator through C18, a 100 pF. mica condenser. It is biased by R13, a 1 megohm resistor in the grid return. The combination of the 150 ohm resistor R14 and 0.01 uF. by-pass condenser in the cathode circuit permits this valve to double, triple, or quadruple, with enough excitation for the next doubler. With the c.w. key "up" in the oscillator section, the anode current of V4 is kept to a safe value. 6AG7 valves are not easy to obtain in this country, and if this type is not available, the writer suggests that EF50, 6AC7, or 6SK7 valves may be applied in lieu.

### THE POWER DOUBLER

A 6L6 is used in this stage and this takes the output from the preceding buffer, doubler, tripler, or quadrupler.

A 50 pF. variable midget condenser (C23) is coupled to the 6L6 grid and provides variation of excitation control. Bias is provided by R17, 100,000 ohms, and the cathode resistor, R19, is 400 ohms. The latter is by-passed by a 0.01 uF. mica condenser. A 50 ohm 1 watt resistor in series with the grid leak and another in the anode circuit are provided for reading the 6L6 grid and anode currents by shunting a milliammeter at these points.

### MECHANICAL DETAILS

The diagram of W6EBT's exciter, with the coil specified, shows that the v.f.o. covers between 3488 and 4050 Kc. The main tuning condenser is solidly mounted on angle brackets and operated by a vernier dial with suitable coupling. The v.f.o. coil is shielded to help isolate and eliminate temperature changes. This shield also deflects heat from the other valves.

### COIL WINDING DATA

Oscillator—

L1: 10½ turns 20 enam., 1½" diam., spaced diameter of wire.

L2: 3 turns 20 enam., interwound at "earth" end of L1.

6AG7 F.M.—

L3: 50 turns 31 enam., 4½" diam., close-wound, tapped at 15 turns from "earth" end (iron core slug, see text).

6AG7—

L4: 80 metres—36 turns 20 enam., 1½" diam. closewound.

40 metres—18 turns 20 enam., 1½" diam., spaced 1/16" between turns. 20 metres—8 turns 20 enam., 1½" diam., 1" long.

6L6—

L5: 80 metres—41 turns 20 enam., 1" diam., closewound.

40 metres—20 turns 20 enam., 1" diam., spaced 1/16" between turns. 20 metres—12 turns 12 enam., 1" diam., spaced diameter of wire. 10 metres—7 turns 12 enam., 1" diam., spaced ¼".

### ALTERNATIVE SUGGESTIONS

As mentioned previously, 6AG7 valves are scarce, but if the reader has any on hand from war surplus equipment, well and good. Other types can be substituted and considerable latitude is permissible, excepting in the case of the 6SL7 audio valves. A 6SN7 can be used, but less audio will be produced; the 6SL7 being a higher gain valve.

The writer's exciter has the v.f.o., which is the series tuned Clapp type, on 160 metres, and the valve used is a 12SJ7. The isolator stage is a 12SK7. The tuned phase modulator is a 12SL7 and the audio input valve one of similar type. Following the modulator is the doubler (to 3.5 Mc.), using a 12A6.

The reason that 12 volt valves are used is simply because they were on hand from disposals gear. In the 6 volt series the valves will be a 6SJ7 v.f.o., 6SK7 isolator, 6SL7 (or 6SN7) modulator, 6SL7 audio, and 6V6G doubler. With an 807 as a p.a. at 20 watts following the exciter, reports on 80 metres are excellent—there is ample deviation available for a.m. receiver reception. With the exciter driving the 40 metre assembly, which has a 6V6G doubler driving an 813 final, the results are all that can be desired. Stations often have to be told that n.b.f.m. is in use.

It will be realised that with appropriate miniature valves, one could make up a very compact phase modulated exciter/transmitter on these lines for all-band coverage. The 12AT7 valve would be a good type in the modulator-audio set-up. Whatever the reader decides to do—it presents no problem to incorporate a phase modulator-audio combination as shown in the diagram for V3 and V6. Two 6SL7s can be built into any exciter, irrespective of the v.f.o. used. Final emphasis is placed on the advantages of n.b.f.m. These are:

1. Much less initial cost than a.m.
2. Reduction in power consumption—the audio power needed is negligible.
3. More carrier output can be used in the final stage because the valve or valves can be operated at c.w. ratings.
4. Final stage excitation needs are less severe—there are no amplitude peaks to consider and quality of modulation is not affected by the amount of drive available for the final.
5. Tuned circuit and other components in the final stage need only be adequate for c.w. operation.
6. Over-deviation does not have the same effect as over-modulation in a.m.—spurious frequencies are not produced as in "splatter"; the channel simply expands in proportion to the deviation.
7. It practically eliminates broadcast interference of the kind associated with r.f. pickup in the audio channels of receivers.
8. Tunable types of b.c.i. are certainly not worse with f.m., but tend to be less, as the apparent audio on an interfering beat is usually light or even almost inaudible.



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# DX NOTES BY VK4QL\*

I think the least said about conditions for DX in October would possibly be the better. The noise level on 14 is up here was such that we expect down in VKI in summer time, for 3.5 Mc. Most VKs seem to have the same complaint re noise. In addition, Townsville has been practically dead since early May, so you can visualise the noise from the mains that goes on at night. ZLIBY said that during the Jubilee Contest the static drove him off 3.5 and 7 Mc. Europeans have almost disappeared off the band here, yet 3CX finds plenty of them in the Americas. The odd South African is again appearing on 14 Mc. in the late morning, and an increasing number of South Americans are appearing in the afternoon and evenings. 3CX found the evenings quite good, yet here it was almost waste of time switching on Rx.

The band survey is as follows, with times in G.M.T.—3.5 Mc.: 2DG tried this band in the Contest but had no contacts. Wasn't interested in listening to static myself.

7 Mc.: This band has been almost useless for DX or interstate. Practically nobody had been heard there mornings or evenings, the DX Contest producing the main activity. 5JE, who haunts this band with a fair amount of success, was not so successful this month. At one time in the period he heard 88 signals from the States. Ted worked, amongst others, VP1NM, V5STNG, Y5ARU, FK3WB, EA4 at 9700. If any VK has made 7 Mc. W.A.S. 5JE would like to know, he still needs N. Dak. and Wyo. His countries

score is 56 and still has hopes of 7 Mc. DX C.C. 2DG worked HZIKE, 3V8 and FA8. 1BK-1LZ found the band open between 1900 and 2100 on 13th October to Europe, N. Africa and N. and Cent. America. They can still hear G3 to 0730 and Q5060 YULAF0. My own 7 Mc. reflects the poor band in Z56AAE, Z50TF, KJ4AP, HK3DH.

14 Mc.: 2DG reports nothing outstanding in his contacts during the DX Contest. He lists TIROE\*, ISIHM\*, 3VB8B\*, MD2PJ\*, MJ3RG\*, CETZQ\*, 2ACX lists Z58MK, FB8BB, VP5BF Caymans; Ari has been looking for FB8ZZ, has now reached 206 confirmed. 3CX produces EQ3PM, CETZQ, HS1UN, VP4, VP1, Y1\*, 954, 141UE, FB2AA, CRT, FB2A, CRT, 141UE, A new correspondent, found the band patchy, but is hearing the S. Africans regularly in the afternoons, working a nice catch in ZD6AD at 6800.

He also lists CR5AD, Z58K, ST3AM, MD2PM, KTIDD, FQ8AE, CT2B0, VP5BF, VP8AU, and CMY. John said he finds S. America the hardest continent, but agrees he can't have it all ways, when he finds S. Africa so easy. 1LZ-1BK found FB8ZZ, KB8AQ, VK1NL, CE2AG, SP7BA, EHC, 141UE, LAKB, CG3HF, Y1BES, Y1EFE, Y13ECU, YV5BZ, VP1AA, HZIKE, VK1BS. You can see by that that conditions in VKI are not so bad. These two "bounces" found the band similar to 3CX in the evenings. 4BG found an improvement in the bands, but still far from good, and lists HS1UN, QG5CP, FQ8AE, TSF, ELAB, and HZIKE. 20W is not happy about conditions either, and like a few others, mourns the notes missing from the October issue of the magazine. Seems a few people are reading these notes, including quite a few DX stations. Gordon added one new country with KMBX, FB8ZZ\*, CR9AF, VQ2AB, VQ2GW\*, ZD1SD\*, HZ1AR, F88AG\*, F8JBC\*, CT3AN\*, FT5PT\*, FQ8AQ, FQ8AJ, 3ABAJ, QG5CP, QG8AR, IS1FIC, 4W1AC, PKTHI\*. The best catch of the month was 4W1AC in Yemen, who was apparently W5EJ, which is the QSL address. He said he was on for special permission for one hour daily. Has QRT after about one week's operation.

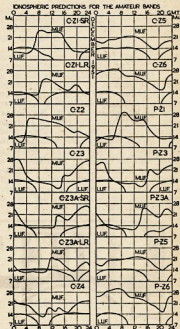
28 Mc.: Not much to report, but the band has been improving. Some good DX seemed to have been landed during the DX Contest. Otherwise, it's a matter of being around when the band decides to open. One strange thing I noticed in the C.W. Contest was the fact I could work very little DX, yet VK2, VK4 and ZL stations were audible. One strange thing 9GW is putting a hefty signal into VK7, and he also worked 5W0WS, who was mobile outside Athens and putting in a good signal.

The "gen" section this month produces that a couple of the S. African boys are going for a holiday and their holiday is intended to bring VQ1AA on for a period in December. HC8GI is expected to operate from Galapagos for a period of one week in December also. FN8AD

is reported to be active again. There is a possibility that our "friend," VR7AA, is also now using the calls of FH8AB and ZD8AA. The FH8 QTH is given as Wallis Is. Has been worked by the W boys, but nothing known of his being heard in VK, which seems to indicate he is "foney." 5BZ might let us know if CETZQ, Chilean Antarctica, is a separate country. Some stations are now appearing with the KT prefix, and giving the QTH of Tangier. My KT was somewhere in the Pacific. ZD6EJ is looking for VK contacts. VP8CDI has been advised he won the 1951 Senior B.E.R.U. Contest.

Once again, thanks for assistance gang. The thought for the month: "If you have no intention of sending a QSL to the station you are Q50ing, play the game, don't say 'will sure QSL'."

## PREDICTION CHART FOR DEC., 1951



## DX C.C. LISTING

### PHONE

Call	No. Ctr.	Call	No. Ctr.
VK3EE	- 10 158	VK3WFW	- 10 158
VK3JD	- 1 155	VK4P	- 8 114
VK4HR	- 12 151	VK3AWW	- 14 112
VK4J	- 12 150	VK4P	- 10 109
VK6KW	- 4 145	VK4D0	- 20 104
VK6BZ	- 3 141	VK2ADT	- 19 102
VK6AB	- 1 136	VK6GIA	- 18 101
VK3LN	- 11 132	VK6PJ	- 19 101
VK6DD	- 6 126	VK3GG	- 18 100
VK3JE	- 7 123	VK3JG	- 5 100
VK4WJ	- 17 121		

### C.W.

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	- 6 183	VK3PH	- 31 119
VK3FH	- 5 187	VK3M	- 25 118
VK3EL	- 9 184	VK3UM	- 25 118
VK4HR	- 8 154	VK3XK	- 30 114
VK3EO	- 2 152	VK4DA	- 7 113
VK3CN	- 1 151	VK3PL	- 38 113
VK8SA	- 25 150	VK7LZ	- 17 112
VK3VW	- 4 143	VK4QL	- 36 110
VK3QL	- 5 141	VK4RC	- 13 107
VK3JB	- 10 138	VK4YL	- 39 106
VK6RU	- 18 135	VK3YD	- 27 105
VK6GV	- 16 132	VK2YC	- 34 103
VK6AB	- 23 132	VK3FH	- 34 103
VK3CX	- 26 132	VK3AIA	- 14 101
VK4P	- 11 129	VK3NC	- 19 101
VK3AB	- 23 128	VK3DA	- 19 101
VK4RF	- 11 125	VK7RK	- 22 100
VK4D0	- 20 125	VK7LJ	- 24 100
VK3JE	- 21 124	VK3AEZ	- 35 100
VK3EK	- 3 122	First VL	

### OPEN

Call	No. Ctr.	Call	No. Ctr.
VK3BZ	- 4 202	VK3AWW	- 45 115
VK4HR	- 7 190	VK3JA	- 43 114
VK6RU	- 18 181	VK2ADT	- 14 113
VK3JE	- 12 180	VK3P	- 46 112
VK3HG	- 3 171	VK3PG	- 49 111
VK4DI	- 2 170	VK3MM	- 49 111
VK3XK	- 23 167	VK4RC	- 12 110
VK6KW	- 13 165	VK3BZ	- 34 110
VK4EL	- 10 163	VK3ZC	- 25 106
VK4P	- 25 155	VK3PL	- 11 106
VK4D0	- 15 151	VK3AWN	- 36 105
VK4KS	- 24 149	VK2VN	- 18 104
VK3FL	- 26 143	VK4UL	- 27 104
VK3JB	- 10 138	VK6PJ	- 44 104
VK3OP	- 19 137	VK6PW	- 50 104
VK6DD	- 22 136	VK3HZ	- 17 103
VK3LN	- 29 135	VK3KH	- 21 103
VK3ADE	- 28 133	VK3ZT	- 37 103
VK3AHA	- 9 128	VK3HO	- 38 103
VK4WJ	- 23 128	VK3DA	- 42 103
VK3AAM	- 20 125	VK7RK	- 31 102
VK4NS	- 16 123	VK4TY	- 35 102
VK3HT	- 41 123	VK3GV	- 48 102
VK3AJ	- 33 119	VK2ACK	- 33 101
VK7LZ	- 23 116	VK3TG	- 39 100

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## The Eddystone 696 Absorption Wavemeter

We have recently had the opportunity to test the Eddystone 696 Absorption Wavemeter, and after using it for a few days, find it is hardly recognisable with the usual type using the tuned circuit and pea lamp in series as an indicator.

In this instrument, for it is an instrument in spite of its simple circuit, the usual tuned circuit is retained, but it is the sensitivity of the indicating device that makes all the difference.

A Germanium crystal rectifier is used to operate a 0-200 microammeter, in conjunction with a condenser and a series of plug-in coils, covering the range from 1 to 180 megacycles.

The use of the 0-200 microammeter in place of the usual 0-1 milliammeter means that a sensitivity five times as great is attained. It would be possible to use a meter more sensitive again, but a meter such as a 0-50 microammeter, would be so sensitive as to be embarrassing, apart from the risk of damage. It seems, therefore, that the meter chosen offers the best all round results.

Sensitivity is such that full scale deflection can be obtained at distances of five to six inches from a 676 oscillator operating on 90 meg., whilst on the lower frequencies, even better sensitivity is found, especially on 80 and 40 metres and lower.

Here are a few of the uses to which this instrument was put in the few days of testing:—

(1) Finding the resonant frequency of grid dip oscillator in the range 1-180 megacycles, its coil ranges, etc.

(2) Checking to see if a receiver oscillator was oscillating.

(3) Finding out what harmonics were being radiated and their relative strengths.

(4) Tracing the frequency, amplitude, and location of an obscure parasitic in the final.



(5) Making the discovery that the Gamma match used to feed the "Plumber's Delight" three element rotary on 10 metres was causing the whole of the metal structure supporting the beam to be alive with r.f.

(6) Checking the feed line for standing waves.

Numerous other uses for the Wavemeter will occur to the reader, but the

few mentioned above will serve as a guide.

The Eddystone type 696 Absorption Wavemeter is built into a small die cast metal box, and is fitted with a small square type 0-200 microammeter, a socket for the plug-in coil is provided, and the variable condenser is fitted with a 0-100 degree dial. A hand calibrated chart is provided for the six plug-in coils, the coils being mounted in a special plug-in base when not in use.

All in all, this meter is a must for any amateur or professional radio man, who does any experimenting with oscillators and transmitter equipment.

We are indebted to R. H. Cunningham Pty. Ltd., 118 Wattletree Road, Armadale, S.E.3, for the opportunity of testing this instrument.

## CRYSTAL SWAP

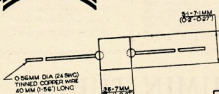
In the last two months' issues we announced that this section would be starting in the magazine. This service will be free to members who wish to exchange a crystal of one frequency for one of another, and will be listed once only.

Members who wish to avail themselves of this service should forward their name, address and call sign, frequency of crystal they wish to swap and frequency of crystal they desire. The proprietors of the magazine will accept no responsibility for any crystals, or correspondence. Those desiring to swap should deal direct with one another.

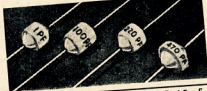
455 Kc. filter crystal; wanted 1600 or 1900 Kc. filter crystal or dual freq. 1000-100 Kc. crystal. E. J. Porrett, VK2AL, 29 Currawang St., Blakehurst, N.S.W.

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TOLERANCE OF CAPACITANCE	Guaranteed not less than —20% of stated values at 20° C. (on values 3.3pF and above). Nom. capacitance below 2.2 pF. Test conditions 10V. RMS. at 130 Kc/s.
INSULN. RESISTANCE	Greater than 5,000 Meg. at 1,500V. D.C.
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TEST VOLTAGE	1,500 Volts D.C.
MARKING	Capacitance read in k on white ground.
NOTE	Dimensions shown are for capacitors with Finish "C." Finish "A" increased overall dimensions by approx. 2 M.M., and Finish "E" by approx. 1 M.M.



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# FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

## NEW SOUTH WALES

**General.** The October meeting of the V.H.F. Group was held at Science House on Friday, 5th October. Being no lecture arranged, the evening was given over to discussion and an impromptu debate, the question being debated, "That v.f.o.'s increase operating efficiency on the v.h.f. bands." At this meeting it was also decided to set a date by which all Sydney stations would vacate the recently set aside country stations attempting to work into the city area, city stations having agreed to keep this frequency clear of local interference. This agreement comes into force as from the 31st October, 1961.

**50 Mc. News.** This band has at last decided to behave and Interstate contacts have been made earlier than ever before. The band showed signs of opening during the afternoon of 22nd October, both Adelaide and Hobart Beacons coming through very strongly. The band finally opened to VK3 about 2000 hours and continued to be in and out during the rest of the evening. First VK3 to work into VK5 this season was 2RU—Major doesn't miss much on this!

The following day the band was open to VK5 in the morning for about one hour and just after midday 2TLZ was worked. Again on the 23rd the band was open to VK5. During the evening, VK3s were heard but not worked, our old friend Stan 2AFL (ex-2LY) was the first one heard, but just wasn't playing speak! Since then, the band has remained closed, but should brighten up the coming month (Nov.).

The arrival of the DX has not increased the activity on 50 Mc. to any great extent. 2ALU was heard working on the band and 2AZN has returned but otherwise the band population remains much the same as it was before the openings.

**144 Mc. News.** This band still remains the most popular band and most activity is concentrated here. 2OA is a new station on the band using 7193s and a four element beam which is up at times supports on his head! 2SB was heard operating mobile in the Eastwood area. The V.H.F. Group Spring Field Day was held on the 144 Mc. band on Sunday, 26th October, seven stations participating. Despite the small number in the field, a good time was had by all and quite a large number of contacts were made. 2YM went into 2AOA and 2IT to Mt. Tomah, but upon arrival discovered that they had left their generator at home—hence the mod. osc. came into use and the 1143 remained as supercargo! On the last field day, 2ANF, who also went to Mt. Tomah forgot to take the Tx—maybe this otherwise excellent location should be renamed Mt. Jinx!

On the same day 2JW, of Orange, went to the top of Mt. Canobias in that district and worked 2WH and 2NS. He also heard a signal on the low end of the band which he could not identify. Norm is doing some good work on 144 Mc. and recently journeyed to Sydney complete with 144 Mc. gear which he operated from Eastwood during his stay in the big smoke. 2WH has been able to establish two way contact with Norm 2JW from their home locations after an amount of trying. 2WH has also lost his three over three during the recent wind and at time of writing John seems to be concentrating on 28 Mc. No news from Young where v.h.f. work is fairly well advanced.

In the Northern Zone 2XO has got his 144 Mc. gear going, along with his "gold plated" antenna and has been in working some of the chaps in that area. Crieft put a signal into

Tamworth, about 145 miles, to 2APS. 2PA at Port Macquarie works 2AHH at Kempsey fairly easily. 2AIFY, Tare, is another station with 144 Mc. gear going.

In Sydney the talk is of bigger and better beams and more power to be able to work some of these country stations. 2ARF has put up a new beam—four over four over four. 2MQ also constructing a new beam. 2AOA has the biggest beam in Sydney—32 elements, containing 144 Mc. gear, of 15 elements spaced 10 feet apart. With activity on the increase in country districts and gear being improved in the city, the possibility of city to country contacts is brighter. With fair weather and plenty of gain in the beam 144 Mc. signals will travel a long way, however, the signals have to be received so in the live of activities concerned with beams and finals, don't forget to consider the Rx! Nothing could be more ludicrous than a station equipped with a 100 watt Tx of high efficiency, a large multi-element beam with high gain—and a super receiver Rx or ASV Rx!

**576 News.** News of doings on this band is scarce this month as those active on the band so bury themselves that it is almost impossible to make contacts with them on other bands.

2HL has had the loan of Cec Cronan's 576 Mc. gear and has been making contacts with most of the 576 Mc. enthusiasts. Horrie has an ASB7 Rx of his own but at time of writing has not yet converted it for the band and is still demonstrating how it is possible to work out of a hollow; Roy is at present away on a holiday so hasn't been heard. 2ABR, next door neighbour of 2AIZ, has been making good use of his new Rx. No other news to hand—what about it fellows! Could one of you come up for air sometime and pass on the news of activities!

## SOUTH AUSTRALIA

To clear up a point re the VK5 V.H.F. Contest. One contact per station each Sunday night is permissible.

The weather charts on the 22nd October showed an inclination for a break through on 50 Mc. due to the cold front covering the whole of southern Australia and as far as Alice Springs. True to form at 1940 C.S.T. the VKs broke through. 2RU, 2ALU, 2ABC and others were heard. The band was also open on the 23rd and 25th October. Comparing notes, this is about the first time an opening has occurred in October so the way to the top may be opening.

A note from 5BC advises he worked 2RU and 2ALU on 22nd and 2ANF at 1000 hours on 23rd, also 2LZ at 1230 p.m. In the evening he worked 2ABC, 2RU and 2AFL. 5BC was out for a short time on 26th. 5MA is dabbling with f.m., bemoaning the fact he missed the break through. 2OT in Broken Hill has copied 5BC's signal there OK. So far, 2DQ has only a Rx going, will be on 50.4 with p.p. 807s soon. This broken Hill may be a hot spot for 2DQ copies 5JD when he was in Alice Springs for 30 days. A 50 Mc. break also occurred on 5th November to VK4. 5JD worked 4RY, but could not QSO 4BT.

On 288 Mc. 5AX, Gawler, is using two watts to a 636 Tx and also a 636 Rx. Antenna is 12 elements. Les has been heard in Adelaide. He was working from Mt. Lofty 288 Mc. 5RO. 5OQ is also a newcomer to 50 Mc. 5GF on 288 is using a two half waves in phase antenna backed by a corner reflector. 5RD is in Blackwood and should put out a good signal, having the height.

To all the v.h.f. gang, A Merry Xmas from v.h.f.ers in Victoria and hunting during the DX season and Contacts.

## About Plug-In Coils

A useful point to remember about plug-in coils—whether for receiver or transmitter application—is the length of the lead from the termination of the winding to the pins of the plug-in coil. Sometimes the practice is to mount coil sockets on stand-off supports so that tuned circuit connections will be as short as possible. That is good practice, but often the coils themselves are constructed with unnecessarily long leads.

Many constructors wind the turns of wire for grid and anode coils in such

a position with the result that the grid windings may finish up somewhere near the top of the form. Thus, between the end of the windings and the pins of the plug-in coil there may be an inch or so of unwanted wire—a serious matter, especially at the higher frequencies of 14 to 30 Mc. Many tuned circuits fail to cover an intended range by treating coils in this manner.

In the case of coils intended for 20 metres, the actual coil may have only three or four turns, but inclusion of the long leads inside the form makes the coil equal almost to a five or six-turn coil.

The better way to go about coil winding is to arrange the windings as near to the pins as possible.

# Low Drift Crystals

FOR

## AMATEUR BANDS

ACCURACY 0.02% OF  
STATED FREQUENCY

3.5 Mc. and 7 Mc.

Unmounted ..... £2 0 0

Mounted ..... £2 10 0

12.5 and 14 Mc. Fundamental  
Crystals, "Low Drift,"  
Mounted only, £5.

Spot Frequency Crystals  
Prices on Application.

Regrinds ..... £1 0 0

THESE PRICES DO NOT  
INCLUDE SALES TAX.

# MAXWELL HOWDEN

15 CLAREMONT CRES.,  
CANTERBURY, E.7,  
VICTORIA

## 50 Mc. W.A.S.

Call	Certificate Number	Additional Number	Countries
VK2WJ	13	3	
VK4RY	2	2	
VK3VW	9	2	
VK5LC	1	1	
VK6DW	3	1	
VK3R	4	3	
VK3KP	5	1	
VK3RR	6	1	
VK3RR	7	1	
VK3AEZ	10	1	
VK3XA	11	1	
VK3GM	12	1	
VK3CCL	13	1	
VK3ABC	8	1	



# Tasmania's Third Successive Win

Congratulations to Tasmania on again winning the Remembrance Day Trophy. The "Apple Islanders" certainly have a very good record in this Contest, now having won the Trophy three years in succession.

Unfortunately, as in previous years, there was preliminary misunderstanding with respect to Rule 1—the duration of the Contest, but this was immediately rectified. It would be to the advantage of Federal Councillors and State Secretaries to make note of the fact that the Contest is of twenty-four hours' duration—unless otherwise altered at the 1952 Convention. When drawing up the Rules for the 1951 Remembrance Day Contest the Federal Contest Committee followed those of the previous year, not having been advised of the error therein, hence the time limit was shown as for 1950.

Some confusion was caused by the layout of the Official Log Sheets and most States asked that this be taken into account when checking Logs. VK3 suggested a new form of Log to be adopted for future Contests. No contestant has been disqualified on this account. As a matter of fact, all Logs received have been accepted although in some cases scores have been slightly altered.

In all 334 Logs were received, being an increase of 67 compared with 1950. VK3 almost doubled the number of Logs forwarded. VK4 likewise. VK7 an increase of 13. Incidentally, the percentage of Logs received from Tasmania was over 50% of the Amateurs in that State! VK5 showed a considerable falling. VK3 and VK5 were much the same. VK3 Logs were not received until 12th September and the Contest Committee applied to the Federal Executive for a ruling as to whether they should be accepted or otherwise. F.E. ruled that they should be accepted. In view of this ruling, the Contest Committee decided to accept all Logs received provided they complied with the rules.

With reference to Logs generally, quite a number were very neatly typed and analysed. Some competitors did not bother to add them to the Log at all, whilst others showed only a grand total on the last page. Very few signed to the effect that they had obeyed the P.M.G.'s Regulations. This, no doubt, was brought about by the fact that the declaration on the Standard Log Sheet did not include these words.

The Contest Committee would like to thank those VKs who participated in the Contest and helped to swell the score of the Mainland States. It was rather unfortunate that the number of Logs received fell short by only one to enable the Territory to participate as a body for the Trophy.

Here are the first six stations in each State—

VK2	VK3	VK4
VK2Z 624	VK3ATN 351	VK4KW 516
VK2DO 613	VK3BD 350	VK4SE 511
VK2WH 566	VK3ALW 450	VK4HR 402
VK2AMR 567	VK3IAW 424	VK4PD 478
VK2AMV 539	VK3JE 418	VK4QL 444
VK2PA 530	VK3OM 408	VK4XG 428
	3434	2831
		2857
Average 572	472	476
Bonus 46	43	99
	618	575

Logs rec'd. 87	86	64
Amat's 1091	947	307
Place, 1949 5	6	4
" 1950 6	5	3
" 1951 2	6	3

VK5	VK6	VK7
VK5LO 539	VK6RU 664	VK7LJ 538
VK5KN 437	VK6VM 480	VK7AJ 493
VK5CN 437	VK6MB 439	VK7B 493
VK5CD 437	VK6LG 422	VK7BH 429
VK5CN 435	VK6WD 287	VK7NC 403
VK5CO 404	VK6LJ 228	VK7JC 381
	2704	2558
		2683
Average 574	425	447
Bonus 84	69	240
	535	687

Logs rec'd. 82	30	50
Amat's 527	186	93
Place, 1949 3	2	1
" 1950 3	2	1
" 1951 4	6	1

## Some Conclusions From The Contest

The system of scoring must be again altered to enable the larger States to compete on a more equitable basis. As an example, VK7 received a bonus of 240 points! The next highest bonus was VK4 with 99.

The Standard Log Sheet should be altered to remove any ambiguity regarding RT/R. Time QSO ended and QSL S-R are superfluous. Participants be asked to help the Contest Committee by adding up each page of their Log! A copy of the Rules be attached to the Convention Minutes.

With reference to the system of scoring, the Contest Committee have deliberately refrained from making any suggestions at this juncture. Recommendations will, of course, be placed before the next Convention, but in the meantime the States should give this matter some thought. In the meantime here is food for thought—An estimate of a ratio between the number of Logs received and the number of Amateurs in the Division, why not substitute number of financial members?

VK2YL 66	VK2RV 52	VK2AXZ 19
VK2AMB 66	VK2ZTI 51	VK2KN 15
VK2WT 59	VK2MC 51	VK2W 14
VK2JP 59	VK2BT 51	VK2AFX 14
VK2YI 57	VK2EU 50	VK2HZ 14
VK2AAW 57	VK2APB 48	VK2HF 13
VK2ATN 56	VK2MV 46	VK2OV 13
VK2PN 54	VK2PC 39	VK2ABO 10
VK2AGZ 54	VK2KJ 37	VK2QP 10
VK2AS 53	VK2ANU 27	VK2AE 10
VK2QZ 53	VK2JG 27	VK2AM 19

VICTORIA		
VK3FH 390	VK3XU 194	VK3ADG 70
VK3XB 379	VK3ARL 183	VK3ED 69
VK3FP 366	VK3SP 182	VK3LV 69
VK3HG 347	VK3GP 177	VK3BA 67
VK3DG 309	VK3HE 175	VK3ADU 60
VK3AKR 308	VK3HT 175	VK3LN 59
VK3AJL 308	VK3H 168	VK3ZS 49
VK3RH 299	VK3ZL 154	VK3AGF 49
VK3FU 292	VK3RN 147	VK3AM 47
VK3AMH 288	VK3R 133	VK3SS 43
VK3AB 280	VK3AGV 132	VK3U 41
VK3AR 266	VK3AJG 131	VK3HL 37
VK3FJ 225	VK3ZQ 125	VK3TB 37
VK3VZ 224	VK3VS 125	VK3Y 37
VK3ZA 216	VK3YP 119	VK3BI 36
VK3KC 210	VK3FO 118	VK3PL 33
VK3ZC 201	VK3AGD 110	VK3AD 30
VK3AH 201	VK3ACI 108	VK3AK 30
	VK3AF 105	VK3ATJ 32
	VK3AD 102	VK3AT 31
	VK3ADW 101	VK3AD 30
	VK3WM 100	VK3FR 27
	VK3TX 100	VK3TO 21
	VK3LS 99	VK3AR 21
	VK3HK 97	VK3OJ 21
	VK3AMV 97	VK3AP 17
	VK3ZU 97	VK3AV 16
	VK3J 70	VK3KH 15
	VK3UG 70	VK3AGP 14
	VK3IL 72	VK3JO 10
	VK3AHK 71	VK3W 9

VK3APF	105	VK3TJ	32
VK3ADP	102	VK3AT	31
VK3ADW	101	VK3HK	30
VK3WM	100	VK3FR	27
VK3TX	100	VK3TO	27
VK3LS	99	VK3ARY	21
VK3HK	97	VK3OJ	21
VK3AMV	87	VK3ARP	17
VK3ZU	82	VK3AVM	16
VK3JI	76	VK3XH	15
VK3UG	76	VK3AGP	14
VK3IL	72	VK3JO	10
VK3AHK	71	VK3WI	9

QUEENSLAND			
VK4RT	373	VK4LM	60
VK4CC	358	VK4KF	56
VK4HD	354	VK4RH	56
VK4BQ	291	VK4HW	50
VK4TN	272	VK4CB	49
VK4DI	256	VK4GA	47
VK4WJ	240	VK4LE	45
VK4XJ	229	VK4HH	41
VK4NC	221	VK4PR	41
VK4PT	219	VK4PN	38
VK4BG	210	VK4JF	36

VK4FE	196	VK4KS	32
VK4NF	178	VK4CZ	28
VK4FJ	175	VK4DH	28
VK4XL	145	VK4LR	26
VK4CK	139	VK4YA	26
VK4FB	138	VK4WD	23
VK4RL	135	VK4JC	19
VK4MW	129	VK4AW	17
VK4GH	117	VK4OA	17
VK4AF	111	VK4WT	17
VK4HZ	108	VK4HA	15
VK4XR	94	VK4ZP	15
VK4IG	87	VK4PD	14

NEW SOUTH WALES		
VK2ANN 526	VK2APV 397	VK2DZ 120
VK2AIA 516	VK2OA 294	VK2AMD 118
VK2AHH 494	VK2OW 287	VK2VN 114
VK2BH 488	VK2XG 278	VK2V 112
VK2JU 421	VK2OE 282	VK2PV 112
VK2ACU 405	VK2QE 261	VK2VP 113
VK2ADT 405	VK2WD 96	VK2VH 96
VK2G 397	VK2ANO 231	VK2ANA 92
VK2AAB 362	VK2APW 248	VK2AAI 91
VK2BO 377	VK2APP 231	VK2VU 90
VK2RA 372	VK2ASW 269	VK2AYH 87
VK2EO 367	VK2AYE 181	VK2ACD 86
VK2ADN 363	VK2AND 177	VK2AAM 72
VK2AM 339	VK2AMP 172	VK2AHI 121
VK2OT 321	VK2AMM 152	VK2GI 68
VK2DY 312	VK2MF 121	VK2EL 66

VK5RR 116	VK5DP 113	VK5B 113
VK5PS 113	VK5B 113	VK5B 113
VK5E 106	VK5H 106	VK5H 106
VK5H 95	VK5TJ 93	VK5U 93
VK5A 92	VK5MA 92	VK5ST 92
VK5W 80	VK5W 80	VK5W 80
VK5V 87	VK5LW 49	VK5ZR 9
VK5W 87	VK5DF 43	VK5SD 8

VK6AZ 227	VK6GU 55	VK6LL 24
VK6ZZ 193	VK6RW 50	VK6WZ 22
VK6H 145	VK6W 50	VK6W 22
VK6L 129	VK6GA 38	VK6PJ 21
VK6SA 82	VK6JK 37	VK6MK 18
VK6H 82	VK6G 37	VK6U 18
VK6HR 73	VK6LI 26	VK6K 20
VK6BO 70	VK6AS 24	VK6RS 17

Tasmania Retains This Remembrance Day Trophy.

In addition to the six leading logs from each State, the following were also received to help swell the various States' totals and thus increase the bonus—

VK2ANN 526	VK2APV 397	VK2DZ 120
VK2AIA 516	VK2OA 294	VK2AMD 118
VK2AHH 494	VK2OW 287	VK2VN 114
VK2BH 488	VK2XG 278	VK2V 112
VK2JU 421	VK2OE 282	VK2PV 112
VK2ACU 405	VK2QE 261	VK2VP 113
VK2ADT 405	VK2WD 96	VK2VH 96
VK2G 397	VK2ANO 231	VK2ANA 92
VK2AAB 362	VK2APW 248	VK2AAI 91
VK2BO 377	VK2APP 231	VK2VU 90
VK2RA 372	VK2ASW 269	VK2AYH 87
VK2EO 367	VK2AYE 181	VK2ACD 86
VK2ADN 363	VK2AND 177	VK2AAM 72
VK2AM 339	VK2AMP 172	VK2AHI 121
VK2OT 321	VK2AMM 152	VK2GI 68
VK2DY 312	VK2MF 121	VK2EL 66



## TASMANIA

VKTOM 363	VKTSK 60	VKTKB 24
VKTBL 346	VKTCF 24	VKTKG 24
VKTJD 316	VKTFJ 49	VKTKI 21
VKTQB 286	VKTAI 48	VKTSJ 18
VKTQA 254	VKTBG 48	VKTSK 17
VKTKA 254	VKTWA 45	VKTCM 17
VKTRY 128	VKTCB 38	VKTAI 17
VKTL 125	VKTSB 34	VKTJT 17
VKTD 125	VKTSB 34	VKTKD 17
VKTDW 111	VKTL 27	VKTBG 12
VKTAM 107	VKTAG 26	VKTHY 12
VKTG 107	VKTBG 26	VKTHY 12
VKTDA 71	VKTBG 26	VKTSR 7
VKTKX 60	VKTYL 25	VKTXW 6
VKTKG 61	VKTCB 6	

## NEW GUINEA

VKGXK 478	VKXSH 22	VK9KT —
VKRGW 96	VKPYT 22	

## LISTENERS' SECTION

F. H. Price, 276 Stations.  
B.E.R.S.195, E. Trebilcock, 175 stations.

## A FEW COMMENTS

The first six stations in VK2 topped 500 points, viz. country stations. VKGRU Sydney Australia, with 520 points, was the highest, 170 on phone, 96 on c.w., and operated for 19 hours on T, 14, and 28 Mc. Highest number of contacts in any one hour, 20, was made on many occasions exceeded 25. VK6AZ, with 227 points, used phone exclusively on one band only. VK6LJ, with 251 used c.w. on 3.5, 7, and 14 Mc. A feature of the VK6 group was the manner in which the scores tapered off from 864 down to 228, thus nullifying the splendid effort.

VK9XK did a splendid job, 194 contacts and 478 points using 3.5, 7 and 14 Mc. In addition to V.M. was used for several contacts. VK1J had 211 contacts, used three bands. VKTAJ used phone only for 201 contacts on three bands.

VK7B and VK7BI, on phone, and VK7J, on 3.5, 7 and 14 Mc. VK3ATN, using 40 watts to a single 807 had 229 contacts for 581 points. VK3BD, with 559 points, could not be seen but the distance. VK3GM gained 415 points on phone. VK3LO did most of his on phone and sent in a very neat log. VK5MD showed the old-timers how. VK5MD from Darwin added quite a deal of interest.

VK4KW, for Queensland, gained 516 points all from one band and was one of the few that used four bands. VK4FL also obtained his points from phone. VK4QL was strictly c.w., and a real west leg and was one of the few who signed to the effect that the P.M.G.'s Regulations had been observed.

Four listeners' were logged. F. H. Price, an s.w.l. from VK6, logged no less than 278 stations. Eric B.E.R.S.195 logged 175 stations, in all he logged a total of 558 stations some no less than 12 times.

—Federal Control Committee.

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## CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

I Collie St., Albany, W.A.

Editor "A.R." Dear Sir,  
As a result of my mooping on six or somewhere I believe there are big things brewing in the Big City of once more. Some "Stool Pigeon" of the Federal Executive has brought up the matter of admission of Associate members. What colossal impudence, as if the W.A. Division could, for one moment, consider turning its back on the highest standing in the "States" into a mere "glorified Listeners' League."

Why be bothering assisting blokes to get their tickets. The Society will do it, and do not W.I.A. can pinch them—or can it, and for how long? If, I mean when, it comes to a serious difference between the two bodies, which side will all these members, ex-Society, take? The answer is obvious.

What was this thing we now hear called Transix? Was it the W.A.R.T.I.? Who instigated the W.A.R.T.I.? Was it instigated by a very few members of the Institute who were unable to pursue the matter to the end of thinking in relation to this matter of Associate members? I remember attending a meeting of this new body, there were five or six persons present. I could see no necessity for another Amateur body, attended no further meetings and did not renew the subscription—if I ever paid one.

Were these few members who instigated this break-away from the W.I.A. all engaged in wireless in some form or other? I doubt it. This gentlemen, is how some people think

a democratic system works. If you can't get a majority with you, just pull out and form another little thing.

The Wireless Institute (even in this State) was not founded only by persons with transmitting interests, but by a number of people interested in the study of wireless. In former days the associate member was always there to do a job of work, both physically and in many other ways. In fact, there were more often than not some of the full members.

It is not so long ago that many members of the W.I.A. in W.A. did not even know that associate members existed, and were they deliberately kept in ignorance?

The radio clubs were formed prior to this break-away. Why? I think because the W.I.A., at that time, would not provide classes for those associate members who desired to take the examination for A.O.C.F. Some members started the club idea, and some were kept out of them going for about thirty years. Good on you, Bert.

Who were those opposed to the classes? Close inquiry may find that they were the same blokes who, a little later, instigated the break-away. Anyhow what's all the argument about? The easiest way to get over the matter of unified constitution is for all those States who now have associate members to chuck them out and thus come into line with the minority. Isn't that the way the domestic system of some countries work? The majority must on no account dictate to the smaller number, but must be guided by the larger.

And speaking of people who don't know who the Federal Executive are. It wouldn't surprise me at all if a station in W.A. (whose signal could be heard in Victoria) went on 14 Mc. and called CQ Federal Executive. He would get a reply about six months earlier than if a station in Victoria on the same band called CQ W.A. Council! Thrillpate, please Max.

Yes, I know. All this is none of my business for I am not a member of the W.I.A. But, Max, I wouldn't like to see the Institute in Western Australia struggle. Use some of us have happy memories of the days when the associate member was not "without the pale."

I think it's good for business to let everybody know what we think of those "Glorified Listeners' Leagues" on the other side of the desert.

—L. G. WILSON, VK6LG.

Editor "A.R." Dear Sir,

The above letter has been referred, prior to publication, to this Division by Federal Executive. We desire to close the matter at once and in reply make the following remarks:

1. It is obvious that the comment and criticism by 6LG refers to the contents of a circular which was sent to all members by one member, at his own expense, as an expression of his opinion of Constitutional and Federal matters which have been fully aired and discussed by all members prior to the acceptance of our new Constitution.

2. This Division has accepted without one dissenting vote the Uniform Divisional Constitution, with some amendments, but including some amendments.

3. In conclusion it is suggested that 6LG, as a non-member of this Division, refrain from publishing such criticism, when he does not know the full facts. The above the W.I.A. Division encourages criticism, constructive and otherwise from VK6 members.

H. B. LAING, Hon. Secretary, W.I.A. Division, W.A.

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## AMATEUR CALL SIGNS

FOR MONTH OF SEPTEMBER, 1951

### ADDITIONS

VK— New South Wales  
2LP—L. R. Burston, R.A.A.F. Station, Williamstown.  
2OK—J. T. Lake, 48 The Promenade, Sans Souci.

### Victoria

3ET—K. Corcoran, 5 Albert St., Pascoe Vale.  
3YH—R. V. Fisher, 12 Campbells Cres., Ballarat.  
3ALI—P. Lempers, 5 Ulswarra Cres., Toorak, Melb. (Portable).

### Queensland

4BL—W. A. Easterling, c/o O.T.C.A. Thursday Island.  
4GF—D. A. Crowley, Hill St., Cooper's Plains.  
4SF—S. J. Ford, Warwick Rd., Churchill, Ipswich.  
4VO—A. Wrembeck, Glencoe, via Goyrie Junction.

## Tasmania

TKO—G. N. Kerrison, 47 View St., Dymnryne, Hobart.

## Territories

1SW—S. J. Wyatt, Macquarie Island.

## ALTERATIONS

### New South Wales

2AG—Pacific Highway, Derowara.  
2BQ—Richmond Street, Tumut.  
2GJ—13 East Drive, Bexley North, Sydney.  
2IK—22 Craig Street, Bankstown.  
2OE—3 Asher St., Georgetown, Waratah, 2N.  
2TH—85 Bondi Road, Bondi.  
27Z—12 Richmond Avenue, Dee Why.

## Victoria

3BH—Corner Ellendale Rd. and Princes Highway, Noble Park.  
3DC—9 Irlibarra Rd., Canterbury, E.7.  
3IZ—Commercial Hotel, Yarram, W.15.  
3RP—27 Laurie Street, Newport, W.15.  
3TE—23 Cole Street, Elwood, E.3.  
3UC—15 Myrtle Road, East Camberwell.  
3XW—13 Reserve Road, Beaumaris, E.10.  
4ADB—13 St. Andrews St., Camberwell, E.6.  
4ACD—Derwent House, Leongatha.  
4ADF—13 St. Andrews St., Camberwell, E.6.

## Queensland

4PB—Timbury Street, Moorooka, Brisbane.  
4RA—111 Old Scarborough Rd., Scarborough.  
4RJ—Methodist Parsonage, 89 Harcourt Street, New Farm, Brisbane.

## South Australia

5DE—Barton Trans. Auto. Railway, Barton, S.A.  
5HE—c/o. Salisbury Hotel, Salisbury.

## Western Australia

6BJ—101 Fitzgerald Street, Geraldton.  
6CK—c/o O.I.C. Dept. Civil Aviation, Halls Creek.  
6GS—c/o. National Regional Station 6WA, Wagin.

## Tasmania

7CL—33 Welman Street, Launceston.  
7GM—24 Douglas Street, Launceston.

## Territories

9FM—Dept. Civil Aviation, Madagaj, T.N.G.

## DELETIONS FOR AUGUST AND SEPTEMBER

### New South Wales

VK—  
2ND—Cancelled.  
2ACW—Cancelled.  
2ADJ—Cancelled.  
2AJP—Cancelled.

## Victoria

3EL—Cancelled.  
3GT—Cancelled.  
3HJ—Cancelled.  
3NP—Cancelled.  
3SC—Cancelled.  
3VU—Cancelled.  
3AGW—Cancelled; now operating under VK9BI.  
3ALJ—Cancelled.  
3AMI—Cancelled.  
2AOH—Cancelled.  
3ARN—Cancelled; now operating under VK6BQ.

## Queensland

4AR—Cancelled.  
4DJ—Cancelled.  
4EH—Cancelled; now operating under VK2RH.  
4KJ—Cancelled.  
4KC—Cancelled; now operating under VK3ET.  
4ZO—Cancelled.

## South Australia

5BJ—Cancelled; now operating under VK2AFW.  
5BL—Cancelled; now operating under VK4GP.  
5LF—Cancelled.  
5ML—Cancelled.  
5NM—Cancelled.  
5PL—Cancelled.  
5RB—Cancelled.  
5SR—Cancelled.

## Western Australia

6AD—Cancelled.  
6AF—Cancelled; now operating under VK3AGZ.  
6AN—Cancelled.  
6AU—Cancelled.  
6BX—Cancelled.  
6RM—Cancelled.

## Tasmania

7MC—Cancelled.

## Territories

1RB—Cancelled.  
1YM—Cancelled.  
9TY—Cancelled.

# RAAF VACANCIES FOR RADIO ENGINEER OFFICERS

The Royal Australian Air Force invites applications from suitably qualified men for appointment to Permanent and Short Service Commissions as Radio Engineer Officers.



**FOR A PERMANENT COMMISSION** applicants must be normally not more than 25 years of age, and hold a University degree in Engineering (preferably electrical) or in Science (preferably in physics, mathematics, and electronics), or hold a diploma in Engineering (preferably electrical or radio) which gives complete exemption from the Associate Membership Examination of the Institution of Engineers, Australia. Diploma candidates must also have not less than two years' experience in engineering after completion of diploma or have had war service in any of His Majesty's Forces, or be qualified to commence the first year of study for a University degree in Engineering or Science.

**FOR A SHORT SERVICE COMMISSION** (of 4 years with an extension for any period not exceeding three years). Applicants should be under 45 years and have held an appropriate technical appointment as an officer in His Majesty's Services or have completed an apprenticeship or comparable training in radio engineering, followed by at least five years' experience in that trade. Claims of applicants who have held Warrant or N.C.O. rank in a technical mustering will be given special consideration. Officers serving on Short Service Commissions are eligible for Permanent Commissions. All applicants must be British subjects of substantially European descent.

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Wing Commander ..	71/3	81/3
Group Captain ..	86/9	96/9

**APPLICANTS** with former commissioned service in His Majesty's Forces will be considered for appointment in his former rank or such rank as may be commensurate with his qualifications and experience. Other candidates will normally be offered the rank of Pilot Officer but higher rank may be determined depending upon qualifications, age, and other attributes. Officers are required to contribute to a pension scheme which provides a generous retiring allowance and covers invalidity or death during service.

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# FEDERAL, QSL, and DIVISIONAL NOTES



Federal President: G. GLOVER (VK3AG); Federal Secretary: G. M. HULL (VK3ZS); Box 2611W, G.P.O., Melbourne.

## NEW SOUTH WALES

President: John Moyle, VK2JU.  
 Secretary: David H. Duff (VK2KO), Box 1734 G.P.O., Sydney.  
 Meeting Night: First Wednesday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.  
 Divisional Sub-Editor: Don B. Knock, VK2NO, 43 Yarrington, Waverley, Sydney.  
 Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey; Newcastle: Don McD. Stuart, VK2ASJ, 85 Durr St., Stockton, Newcastle; Lakes: Harry Hawkins, VK2YJ, 27 Comfort, Casemack; Western: W. H. Sutt, VK2WH, Cambilonga, Forbes; South Coast and Southern: Roy Rayner, VK2DO, 42 Pettit St., Yass; Eastern Suburbs: Don Knock, VK2NO, 42 Yanko Ave., Waverley; Northern Suburbs: Harry Powell, VK2AT, Russell Ave., Warringah; St. George: Chas. Coyle, VK2YK, 84 Carlton Cres., Kogarah Bay.

## VICTORIA

President: G. S. C. Semmens, VK3GS.  
 Assistant Secretary: C. Gibson (VK3FO).

Administrative Secretary: Mrs. S. May, Law Court Chambers, 181 Queen St., Melbourne.  
 Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.  
 Zone Correspondents: Western: C. C. Waring, VK3YW, 12 Skene St., Stawell; South Western: K. O'Rourke, VK3AK, Killgrew, Waparra; North Eastern: T. K. Tennant, VK3JC, 36 Wilson Ave., Tatura; Far North West: M. Fothergill, VK3JL, Lendon Ave., Mildura; Eastern: H. O. Keller, VK3ARK, Tinnambra; Northern Western: C. Kase, VK3ACE, Cummingham Ave., Birlchip.

## QUEENSLAND

President: J. H. Farrell, VK4WJ.  
 Secretary: J. F. Pickles, VK4FP, Box 638J, G.P.O., Brisbane.  
 Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.  
 Divisional Sub-Editor: Clive J. Cooke, VK4CC, Kurran Street, Chermide, Brisbane.

## SOUTH AUSTRALIA

President: E. A. Barbler, VK5MD.  
 Secretary: G. A. Bowen, VK5XU, Box 1234K, G.P.O., Adelaide.

Meeting Night: Second Tuesday of each month at 17 Wymouth St., Adelaide.  
 Divisional Sub-Editor: W. W. Parsons, VK5PS, 19 Victoria Avenue, Rose Park.

## WESTERN AUSTRALIA

President: J. Campbell-Watson, VK4JW.  
 Secretary: H. B. Lang, Box NI002, G.P.O., Perth, W.A.  
 Meeting Night: Perth Technical College Annex, Mounts Bay Road, Perth.  
 Meeting Night: Second Monday of each month.  
 Divisional Sub-Editor: R. H. Atkinson, VK6WZ, Box 127, Geraldton, W.A.

## TASMANIA

President: R. O'Mahony, VK7OM.  
 Secretary: L. W. Edwards, VK7LE, Box 371B, G.P.O., Hobart.  
 Meeting Night: First Wednesday of each month for the Photographic Society's Rooms, 183 Liverpool St., Hobart.  
 Divisional Sub-Editor: S. Excell, VK7SJ, 77 Mole St., Hobart, Tasmania.  
 Zone Correspondents: Northern: C. A. Cullinan, VK7XW, 12 Montrose Place, Launceston; North Western: R. K. Wilson, 4 Menai St., Burnie, Tasmania.

## FEDERAL

### AMATEUR RADIO SHOW OVER THE VOICE OF AMERICA

The following is the new transmission schedule for the Radio Amateur Programme presented over the Voice of America broadcast in co-operation with the American Radio Relay League.  
 Far Eastern and Pacific Service: 1230 and 1445 G.M.T. on a Sunday.  
 Frequencies—6050, 6075, 6120, 6185, 9515, 9570, 9590, 11790, 11890, 15105, and 15390 Kc.  
 The times and frequencies are subject to periodic change with changing conditions for propagation.

Another programme of interest to Amateurs is transmitted by the International Goodwill Station OTC, Leopoldville, Belgian Congo, each Wednesday in English at 1810 G.M.T. on 9767 Kc. Anyone wanting to QSL can forward reports to Postbox 26, Brussels 1, Belgium.

### LOSS OF 50-54 Mc. BAND

Back in May this year members of Federal Executive were co-opted by a Working Group of the Frequency Allocation Sub-Committee at the request of the Australian Broadcasting Control Board on the basis that the W.A. could have a voice regarding the possibility of providing two 7.5 Mc. television channels in that portion of the frequency spectrum encompassed within the limits of 29.7 and 148 Mc.

It was a forgone conclusion that a transfer of the 50-54 Mc. band, now allocated for Amateur Station use, to the frequencies between 46-60 Mc. would prove inevitable. Whilst the Institute had virtually little say in the matter the opportunity to represent the Amateurs of Australia was appreciated, and the importance of a harmonically related band was better than no band at all. The change of bands, however, will not take effect until January, 1956.

### W.I.A. PROPOSALS TO THE I.A.R.U.

In conformity with the direction of Federal Council arising from Federal Convention, proposals were directed to the I.A.R.U. regarding the adoption of a standard numbering system by all Societies, and that the numbering system be that incorporated in the VK-ZL International DX Contest from time to time.

These two directions have been encompassed under paragraph No. 77 and are in the June issue of the I.A.R.U. Calendar and forwarded to all Societies for a vote.

### PRINTER'S ERROR

Under the amendments to the Handbook for Operators of Amateur Stations published in F.E. Notes No. 10, October, an error occurred in the printing of the amendment headed "Page 6, para. 33." This should have read as follows:—

"Page 6, para. 33: In the fourth line after 'direct or indirect' insert the words 'for any matter' of a technical character. At the end of paragraph, insert: 'The relevant regulation under the Wireless Telegraphy Act 1905-1936 concerning this matter reads as follows: '36 (1). The licensee of an Amateur Station shall not, except in the case of an emergency and with the consent of the transmitting station, undertake the transmission or reception of messages for third parties.'"

## SILENT KEY

It is with deep regret that we record the passing of:—

VK2KJ—H. W. Crammond.

## SEASONAL GREETINGS

Members of Federal Executive take this opportunity of personally wishing you a Merry Christmas and a Bright and Prosperous New Year.

## FEDERAL QSL BUREAU

### RAY JONES, VK3BJ, MANAGER

Divisional QSL Managers and Amateurs generally are again reminded that Geoff Warner, VK9GW, once O.T.C., Port Moresby, Papua, can only distribute cards for stations in the Moresby area. Cards for stations in other areas of Papua and New Guinea must be sent direct. At the time of writing (November) Geoff will take cards for VK3AB, 951L, 951L, 95B, 9FN, 9WK, 9KT and 9GW. Cards for others are returned to me by Geoff and this causes inconvenience, delays and waste of postage to both Geoff and myself.

Vis GD3UB has just ordered 15,000 cards and hopes during the slack period this winter to catch up on outstanding QSLs. Vis runs a beach cafe and during the summer months has no time for anything outside of his business.

No cards have been received from Box 83, Moscow, since July last. The R.S.G.B. QSL Manager advises none have been received by them since May. While QSL Managers will officially shed no tears over the loss of thousands of station cards, it must be a grievous loss over the loss of 10 or 12 countries and a few zones.

Divisional Managers and others please note the following changes in the QSL addresses for W.I. W4, and W7:—  
 W1-J. R. Baker, Jnr., Box 232, Ipswich, Mass., U.S.A.  
 W4—Thomas J. Moss, WHYW, Box 644, Municipal Airport Branch, Atlanta, Ga.  
 W7—Mary Ann Tatso, W7FW, 513 N. Central, Olympia, Washington.

The address of the Bulgarian QSL Bureau is P.O. Box 830, Sofia, Bulgaria.

## W.I.A. ACTIVITIES CALENDAR

- Dec. 1-2: Fifth All-European DX Contest, C.W. Section.
- Dec. 8-9: Fifth All-European DX Contest, Phone Section.
- Dec. 15-Jan. 8: Ross A. Hull Memorial V.I.P. Contest.

CRAP, Wang, of Box 6, Shimizu, Japan, has closed his Japanese under-state station as from March, 1951. His QSLs take this date.

Interesting cards sighted during October were those from Albert Hix, ex-WBPQC and current holder of TB4QF, Andorra; JA2AC Monaco; and AF3C.

Cards confirming contacts in 1939 have just come to hand for VK3QK and VK3UM from C.T.O.I.I.I. Albert Hix, who has been independent after a mere year or two of waiting for that rare card.

— — — — —

## NEW SOUTH WALES

The present Divisional Sub-Editor regrets that after a long period of vacillation on this issue, he finds it impossible, for business reasons, to find the time to continue appointment. This applies also to the role of Eastern Suburbs correspondent. Correspondents should always copy are advised therefore to address it to the Hon. Secretary, N.S.W. Division, pending immediate action.

The October meeting of the N.S.W. Division was held at Science House on Friday, 26th, and was well attended. President John Moyle occupied the chair. In accordance with a motion passed at the previous meeting the minutes were read and confirmed and without delay the main agenda item followed. This was a lecture by Professor D. M. Myers, of the Elec. Eng. School of Sydney University, concerning Electronic Computers. The attentive audience enjoyed a revelation in the lecturing art in which much sober fact was mixed with humour and good spirits. Such is the Professor's ease of conversation that he is able to explain the most complicated mechanisms and technicalities in simple, easily understood words. The modern electronic computer appears to have been shunned as a study, but the lecturer, accompanying his remarks by projected slides, made at least an attempt to approach the subject with well within human powers. Professor Myers has sponsored and directed the manufacture in Sydney of one of the only seven electronic computers as yet in existence. A spirited discussion followed and the lecturer came up with all the answers to questions.

General business followed; the main items being the Way Way Field Day, the Uniform Constitution, the 500 watt permit for VK2WI, the preparation of the P.M.G. handbook, a request to the R.A.A.F. that a member of the Service address the Division regarding enlistment of Amateurs for co-operation, and a written motion by a country member. The Federal Council approach the P.M.G. with a view to raising the power limit to 250 watts. Results of this year's Remembrance Day Contest were also given in brief, and congratulations are offered to Tasmania for taking the trophy for the third year in succession. It was announced that the P.M.G. had agreed to the input to VK2WI being 500 watts for the weekly broadcast, subject to certain conditions, some of which are hard to meet. The President has been through the minute books and collected policy decisions, which will be entered in the book for easy reference, a task which involved a lot of work. The thorny subject of the power increase was left



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regards to the gang from G Land. To conclude I extend hearty greetings to all for the coming festive season.

#### WESTERN ZONE

Over past few months the zone notes have taken the form of v.h.f. notes but as that is the trend these days, all I can do is record the doings of the month. Any news of activity on the lower frequency bands is still very welcome. The 14 Mc. band of Orange is doing excellent work with pulse transmission, puts good sig. into Forbes on m.c.w. Norm recently went 1000 4.6m ft. to Parkes and put out a 58 signal into Forbes with 1.25 w. input. Contacted 2WH and heard 2NS at 59. Lindsay ZE1 is now fully operative on two. Dave 2NS still patiently trying to get open. The Sydney-Bathurst link on 14 Mc. 50 Mc. beam and final coming along steadily.

Jim 2J missed voice popped up on 7 Mc. this month. Jack 2OF is still at Doonside and is staging a comeback after almost a year off the air. Jim 2J is now a Parkette and hope he will help 2EI to keep Parkes on the map. John 2AMV was given the v.h.f.s. a test to participate in a couple of DX contests. 2WH has to 100 w. on 50 Mc. and waiting for that band to open. Dubbo boys all very quiet. 2AMR on 14 Mc. the only station heard. Rod 2ACU waiting on some gear to be permanently on 144. 2JX is not on from Wentworth Falls as yet but is likely to turn up in one of the contests. 2EX and 2HZ have turned into mechanics and so far nothing has blown up. 2LZ still only on v.h.f.s. 2RT makes 40 between flights overseas. Everyone on the Blue Mts. waiting for the pushdriers and perhaps some emergency work.

#### VICTORIA

##### SOUTH WESTERN ZONE CONVENTION

Saturday, 27th October, was a lovely day and was really perfect for the convention of the South Western Zone Convention. Visitors and zone members began to arrive early in the afternoon and by about 10.00 hours there was quite a gang in the fair city of Warrnambool. Most spent the sunny afternoon seeing the beauty spots at the town, whilst others (3ASD, 3ZM and 3ALG) spent the afternoon to work rare DX on an equally rare antenna, down by the Breakwater.

At 1800 the happy crowd had dinner and at 1930 adjourned to the hall in which the meeting was to be held. The general ragchew was broken up when the meeting was started at 2000 hours. Those present were VKs 3AGD, 3BU, 3JA, 3HP, 3AGV, 3IC, 3GR, 3AKG, 3ZU, 3IC, 3XD, 3ABZ, 3Gastates Bill, Wags, Jim Gibbins and Eric Gidding. During the course of the meeting a 1,000 Kc. crystal for the zone frequency meter was presented by 3AKR. The book-up time was changed to 1900 hours on every Sunday on the 3.5 Mc. band. It was decided that the next zone convention will be held on the first available week-end in April, 1952, at Geelong. After the general meeting and supper, some went to bed early and some did not.

On the Sunday at 1000 hours a hidden Tx hunt was held which was won by 3AGD, 3II, 3AKR and 3BU as a team, with 3AGV and 3IC second. In the winning team 3AGD was driver, 3AKR loop twiddler, 3II observer, 3BU compass man. At 1130 another hunt was held and the same team found the Tx closely followed by 3AMH and 3ASU. After lunch the local shacks and 3YB were inspected and the visitors gradually headed for home.

Of the zone activities generally, 3AGD has at last worked DX on 20 and 6. 3HO has completed his a.c. conversion, and 3ARA has re-built everything and experienced much trouble with wags. 3BW has been having a spot of trouble with his new Tx, but has now cleared it up. 3APG has been having a few contacts with his RC16B Tx using 1 watt. Phil tells me his new Tx, which is band switched for four bands, is almost ready. Bill 3WT is putting out a very good signal on 40 mx and has been working 2L. 3ABE is re-building his rig so has not been on for a while.

3AJT still landing all the DX down Geelong way, has re-built his modulator. 3ALG on 80 mx and had a few contacts there, has not got around to putting his sticks in the air yet, but worked 2L with the antenna strung on the top of the fence. 3BU has been using his 40S and 7A12D again. 3IC AMV very active has a new motor bike. 3AGN has been on for 40 and in long absence, now using cathode modulation. 3ABK still digging post holes. 3AOL not as active over the past month.

##### EASTERN ZONE CONVENTION

Chief interest this month was the Convention held at Warragul on 3rd and 4th November, when 59 Hams, XYLs and YLs enjoyed what 3SS describes as a "sumptuous repast" on the Saturday evening. After the dinner the ladies

attended the movies, while their worse halves made their way to the 3UL clubrooms where the meeting took place. With 3TH as chairman, the minutes of the previous annual meeting were read and confirmed and election of office-bearers for the coming year took place, with the following results: President, Graham Colley 3GZ; Vice-Presidents, 3AHK and 3AMV; Secretary-Treasurer, David Scott; Notes Correspondent 3AHK with 3SG as assistant. Having an assistant, I'll be able to get on the air sometimes!

Various items were discussed and from Max 3ZS and George 3AG we learned quite a lot about the R.A.A.F. Reserve. 3SS complained that 3AG used too many double barrelled words—which Keith couldn't find in his dictionary! He thinks that "umbrage" is a medicine, because people take it!

The next Convention will be held at Balrnade on a date to be fixed. On conclusion of the meeting, the ladies prepared supper, and the earbushers departed for bed about 1 a.m.

On Sunday morning we were taken on a tour of Miller's Linen Thread Works by Mr. Eric Waterstrom and I can say that it is a place well worth visiting. After that we proceeded to 3UL where we were welcomed by

Mac 3AKM, who gave us the freedom of the station, which is soon to be moved to a new location. 3HK, 3FO and Len Jackson had v.h.f. portable gear in action and made contact with 3US at Leongatha on 50 Mc.

Lunch at the clubroom followed and we were entertained by Martin 3AMV with a tape recording of 3WI's 40 mx transmission. We were not amused by the action of a Ham, who has been active long enough to know better, in flopping his apparently uncalibrated v.f.o. onto 3WI's frequency and calling CQ! We have the tape to prove it!

Afterwards we proceeded to the State Rivers' project at Jindivick. On arrival at Jindivick, we were welcomed by Mr. Dixon, of the Commission, who explained that the object of the project is to supply extra water to the Mornington Peninsula and places en route. Part of the job consists of driving about 3,000 feet of tunnel through a mountain and after going about 300 yards into said 'ole, personally I think they can have it on their own! After inspecting the power house, we were entertained by Mr. Dixon at afternoon tea.

About 4.30 the gang began the long trek home, and from the general tenor of remarks heard, everyone had a good time, the credit

## A Merry Christmas

To Members of the Wireless Institute  
of Australia and to Amateurs  
everywhere, we extend hearty  
Seasonal Greetings



WE THANK ALL READERS OF THIS MAGAZINE  
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A new call sign heard on 20 this month is that of associate member Lloyd Brice, 50K, and we welcome the newcomer to the air. Les Max 5GF: Max on business and Les on pleasure, so I am led to believe. Cec. 5BZ is another who is planning a trip home to the old country on 20 this month. Max 5GF is on 20 on 2 m xtl ctrl'd Tx and has built a class 2 stl-standard or frequency checking. Claude will be moving into his new house before Xmas and means that he is sure to be in another direction. 7FA is the only bachelor amateur in the south east gang, and therefore the one to whom they look to for uninterrupted Amateur activity, has not been back from England much longer than 20. He is on 20 on 20, 40, 20, 10 and 2 mx. How do you do it John?

It is not often that I allow technical remarks to creep into these notes, but the foregoing has so much home truth that it can't be kept out. "The life of a working horse is given as fifteen years, but somehow or other DAD manages to last longer!"

## WESTERN AUSTRALIA

Two things must be done at the outset of these notes. The first is to explain the absence of any official Divisional record for several years. The reason is that the SAS had the job taken away for personal reasons some difficult years ago. I have not experienced any interesting anyone else in the task. My name was banded about but as I am not a Divisional member, I have not been a little about this and somehow or other official notification never reached me. However, "it's not my business" I thought. I was a Divisional in print eleven years ago now taken on the job again—same typewriter too. We are a well-preserved pair. Thanks, also, to GLO whose help was invaluable. I have been in the job you read in the October and November issues.

Secondly, while there's still time and space, I want to thank the Divisional members, the X-Files and their families and to all Divisional scribes.

61KRW recently spent a spell in Hollywood and is back at work again. News of Ron's admission to hospital was first received in the coun-  
sion via a 6WI broadcast and it was through another  
sad bereavement. Roger and Mrs. Choate re-  
ceived many messages of condolence on the  
loss of their son Anthony from near and far.  
We hear them try to go point out how nec-  
sary a Divisional broadcast is, not only for  
keeping us in touch with Institute matters, but  
also for the comfort and support we offer to  
those whom we know so well as call sign-  
and as voices, but whom we may also rarely

## TASMANIA

The highlight for this month was to learn that we were successful once again in winning the Remembrance Day Contest. This success is, in my opinion, attributed to our untiring Secretary for his efforts in organising members of this Division, more than half of the licensed Hams in Tasmania participating.

Cancellation of the Ham Convention at Burnie was disappointing. A small number of members, however, did arrive and from what can be gathered a happy time was had by all in at-

# Index to Volume 19-1951

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## HAMADS

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**WANTED.**—A.R.R.L. Handbook, 1942 Special Edition, good condition. R. Higginbotham, 43 Eleanor St., Ashburton, S.E.11, Victoria.

**WANTED.**—ZBI or 2 Receiver, good condition. G. Semmens, 10 Valley View Road, Glen Iris, Victoria.

tendence. Several shacks were inspected and from comments received, the North West Division, although few in number, take a very active part in Amateur Radio. Congratulations to TRB on passing his second class operator's ticket. Brian is now busy preparing to get the other ticket which we hope will be any worry. TLZ also busy preparing for the examination, preparatory to gaining his first-class certificate. F.b. signal heard. TRK now experiencing a b.c. trouble which has retarded activity to a great degree. Trust this is soon overcome Ken.

Seen purchasing some new amplifier equipment in town was CT. TRJ also seen spending some of the "house keeping" money on radio parts. Several members of the TBR Signals Club visited the mainland for stay of a week or so. TAL is due to go shortly also which will prove a break for our busy QSL Manager. A new Ham to join the club is 7FM who now takes active part in the club's affairs. A comprehensive test was made recently throughout Tasmania in an effort to check radio communication throughout the State. Parties were at Queenstown, Devonport, St. Helens, Southport and Hobart, operators at each centre being well known Amateurs. Heard 7OM on 40 mx during the month on c.w. Bob must have known I was listening as he slowed down to my modest speed, in copy Bob. Believe TRX is still active on 40 and 20 mx. New beam working f.b. TFJ seen recently but is not active of late. Bert Clark vows he is going to give active away owing to the present heavy taxation. Complete now with new f.o. is TDW, active again on 40 mx. 7NC active still with quite a choice lot of DX cards being received.

Our November meeting was held on the 7th of the month, the lecture was given by TLJ and the subject being photography which was apparently is nearly as expensive as radio to pursue. Meeting concluded at approx. 10 p.m. Quite a collection of radio parts will, it is hoped, be auctioned at the December meeting so if you are desirous of purchasing some good radio equipment cheap, don't forget, be there or else you may miss out. Len, our club secretary, is seriously thinking of taking up his new job professionally.

## NORTHERN TASMANIA ZONE

TLZ has had advice from George Elliott GSL that he is leaving Britain to live in Canada and should soon be heard with a VEZ call. George, who is very well known to many VK Amateurs was undecided whether to come to Australia or Canada, but VE land eventually won out. TRK and ZL have been active in recent contests and are very pleased with some of the rare DX which came to light. From TBQ comes the news that the six metre band has been opening up for Interstate contacts. Len is still conducting tests with his 576 Mc. gear with associate Percy Crawford on the receiving end. House building is still occupying all the spare time of TRB who now has packed away his Ham gear "for the duration," but uses his Rx for h.c. reception. Henry TRJ has been on our last meeting came TDS with the news of the doings in "the wide open spaces." Hope to see you at more meetings. Hurd and I have been also extended to a visitor from VK3, likewise to Des Gray who is interested in the zone.

Associate Grasmere Nicholls, who was to have brought along a tape recorder for demonstration, caught up with the flu and couldn't make the meeting. However TXW was able to narrate some of the more humorous episodes of the P.I. survey made by TRB and himself—they were chased by bulls that turned out to be poddy calves and on one time were almost locked in a cemetery. Right in the luck is TLX who went along to some local auction rooms recently and picked up some nice disposals gear for a mere song. Henry TRJ has been getting his boat ready for summer holidays on the river and is hoping to have a portable operation on 40.

Hear that TZE has his home recording outfit going well and puts a few live sessions on the new and seven. TAL is active and is looking out for any subscriptions that are overdue so hasn't been active on the air lately. Keep up the good work Les.

## NORTH WESTERN ZONE

We were all very sorry that the Convention which was to have been held early in November had to be cancelled on account of the severe lack of interest in the State, but at our last monthly meeting we were pleased to welcome the State Secretary who paid us a visit. TRB is putting out a very nice signal now with his QO6E/40 in the final and I believe you have all the rays working now Jan. Our sincere thanks go to Doug for the splendid job he is doing as Zone Secretary.

# good fone starts at the mike!

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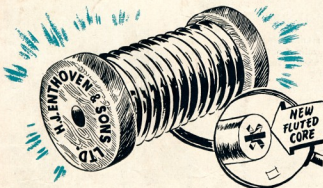
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11	118	2.54	22.4	19.2	24.2	24.8	22.2	20.7	21.4	21.4	21.4	21.4
12	118	2.54	22.4	19.2	24.2	24.8	22.2	20.7	21.4	21.4	21.4	21.4
13	092	2.33	44.6	45.1	47.0	48.3	49.0	50.1	51.3	52.0		
14	080	2.03	58.0	59.1	62.0	63.4	64.1	66.1	67.4	68.5		
15	072	1.83	71.5	73.4	76.3	78.5	79.4	82.0	83.1	84.5		
16	064	1.63	86.0	88.0	91.0	93.4	94.0	96.0	97.4	98.5		
17	056	1.43	118.0	121.0	124.0	127.4	131.2	133.0	137.6	139.0		
18	048	1.27	141.0	145.0	147.0	150.4	154.0	156.0	160.0	162.0		
19	040	1.02	171.0	175.0	177.0	180.4	184.0	186.0	190.0	192.0		
20	036	0.91	194.0	198.0	200.0	203.4	207.0	209.0	213.0	215.0		
21	032	0.81	212.0	216.0	218.0	221.4	225.0	227.0	231.0	233.0		
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